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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

AUG 22 1997

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Advanced Television Systems
And Their Impact Upon The
Existing Television Broadcast
Service

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MM Docket No. 87-268

To: The Commission

SUPPLEMENT TO PETITION FOR RECONSIDERATION

The Mississippi Authority for Educational Television ("MAET"), through its attorneys, hereby files this Supplement to its Petition for Reconsideration filed on June 13, 1997 with respect to the Sixth Report and Order, released April 21, 1997 in the above-captioned proceeding, which adopted the Digital Table of Allotments and related technical rules regarding the digital television broadcast service. In support thereof, the following is shown:

1. MAET is the licensee of flagship public television Station WMPN-TV, Jackson, Mississippi and seven satellite public television stations (WMAB-TV, Mississippi State; WMAE-TV, Booneville; WMAH-TV, Biloxi; WMAO-TV, Greenwood; WMAU-TV, Bude; WMAV-TV, Oxford; and WMAW-TV, Meridian, Mississippi). These stations comprise the eight-station MAET statewide public television network serving all citizens and areas of the State. MAET's Petition for Reconsideration was based on preliminary interference and coverage analyses without the benefit of FCC Bulletin OET-69 ("OET-69"). Attached hereto are engineering statements prepared by MAET's consulting engineers in order to review the earlier conclusions in light of OET-69 and the DTV policies set forth in the Sixth Report and Order. In this connection,

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MAET reiterates that, as the licensee of a statewide public television network, it is concerned about DTV assignments falling outside the DTV core spectrum, Channels 7 through 46, which would allow public television stations to be in the core irrespective of which core the Commission selects.

2. Booneville, Mississippi. MAET's consulting engineers have made engineering studies with respect to public television Station WMAE-TV, Booneville, Mississippi, which operates on Channel 12 and which has been allotted Channel 55 in the Commission's DTV Table. The Commission's DTV proposal is outside the core and would entail wholly unnecessary costs to this statewide public broadcast licensee, including an initial UHF construction at higher power with a subsequent return to its existing VHF channel. As shown in the attached statement, MAET may properly operate on VHF Channel 8 rather than UHF Channel 55 as the DTV allocation. That statement, conducted in accordance with FCC Bulletin OET-69, causes only a minimum of additional co-channel and adjacent channel interference to four area stations in areas where these stations do not provide service. MAET urges the Commission to make the requested change in its DTV Table.

3. MAET's Pending Applications for New Public Television Stations. MAET has filed seven applications for new public television stations on reserved channels. These include two applications filed July 24, 1996 to change from TV translator to public television satellite status (Channel 47 at Hattiesburg, and Channel 45 at Columbia, Mississippi). In addition, on September 19, 1996, MAET filed applications for new public television stations at Natchez, Columbus, Cleveland, Yazoo City and Clarksdale,

Mississippi. In its Petition MAET urged the Commission to confirm protection of these pending applications for reserved channels.

4. In its Sixth Report and Order, paras. 108 and 112, the Commission indicated that it "will maintain and protect those vacant NTSC allotments that are the subject of pending applications" filed during the application filing period which closed on September 20, 1996. In addition, the Commission stated that its "DTV Table replaces existing vacant noncommercial NTSC allotments where feasible, in a manner similar to the approach suggested by the Joint Broadcasters."

5. The Commission has provided no official confirmation of protection for DTV purposes of MAET's seven pending applications. In view of the absence of such confirmation, the attached engineering statement assumes that the pending applications would be granted for DTV operation on the NTSC channels applied for by MAET. That engineering statement concludes that, because of engineering constraints, four of the proposed operations (at Hattiesburg, Columbia, Cleveland and Clarksdale) require an assumption that affected stations would return to their NTSC channels at the end of the transition period, thereby delaying construction of the facility proposed by MAET until that time. An additional MAET proposal (at Natchez) would be precluded until a suitable channel becomes available at the end of the transition period.

6. Inasmuch as the channels specified in MAET's seven pending public television applications do not appear to have been included in the DTV Table, MAET seeks clarification from the Commission regarding the formal status of these pending applications and the appropriate DTV channel maintained and protected by the Commission for these proposed operations. Only in this manner will the Commission be able to provide

assurance that entities such as MAET "who have already begun to invest in new stations, including those planning noncommercial stations, may continue to pursue their ongoing station development projects." Sixth Report and Order, *supra*, at para. 112.¹

Respectfully submitted,

MISSISSIPPI AUTHORITY FOR
EDUCATIONAL TELEVISION

By: Robert A. Woods
Robert A. Woods

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Suite 300
Washington, D.C. 20036

202/833-1700

Its Attorneys

August 22, 1997

¹ MAET also desires a new LPTV station at Amory, Mississippi and requests the Commission to do its best to assure that an available channel within the core spectrum for such purposes will be available after the transition period.

ENGINEERING STATEMENT OF KEITH G. BLANTON OF THE FIRM OF
KESSLER AND GEHMAN ASSOCIATES, INC., CONSULTING ENGINEERS,
IN CONNECTION WITH THE DIGITAL TELEVISION ASSIGNMENT TO
MISSISSIPPI AUTHORITY FOR EDUCATIONAL TELEVISION
LICENSEE OF TELEVISION BROADCAST STATION WMAE-TV NTSC CHANNEL 12
AT BOONEVILLE, MISSISSIPPI

I, Keith G. Blanton, am an associate of Kessler and Gehman Associates, Inc., with offices in Gainesville, Florida. I have been working in the field of radio and television consulting engineering since 1961. I graduated from Duke University in 1951 with a Bachelor of Science degree in Physics.

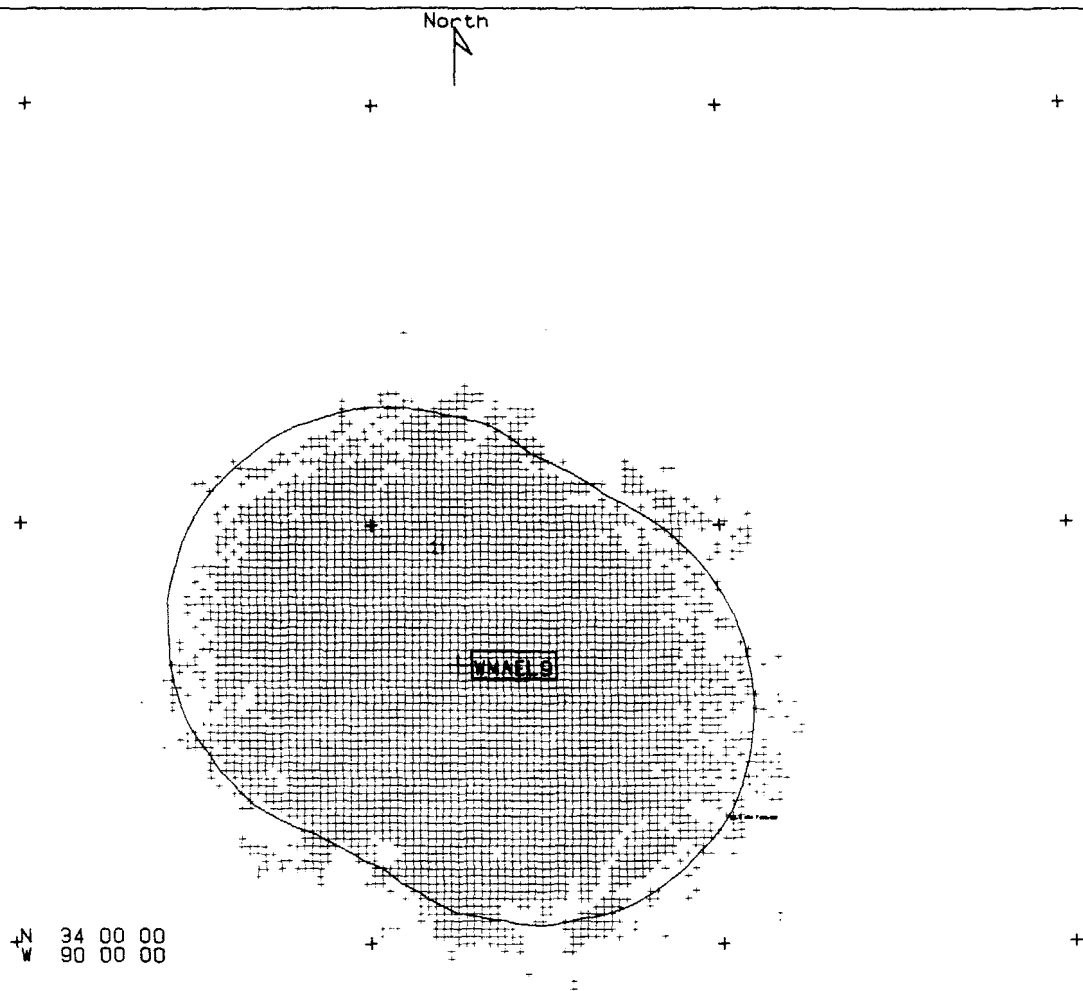
This firm has been employed by Mississippi Authority for Educational Television licensee of television broadcast station WMAE-TV operating on channel 12 at Booneville, Mississippi to make engineering studies in connection with the assignment in the 6th Report and Order in MM Docket 87-268 of UHF channel 55 to be used by WMAE-TV for digital television broadcasting. It is proposed that WMAE-TV be permitted to operate using DTV technology on VHF channel 8 rather than on UHF channel 55 as proposed in the 6th Report and Order. Studies have been made in accordance with OET Bulletin No. 69 which show that WMAE-TV could radiate 3.16 kW ERP at its licensed antenna height of 386 meters AMSL using its licensed directional antenna and causing only a minimum of additional interference to cochannel and adjacent channel NTSC stations KAIT-TV channel 8 at Jonesboro, AR, WDCN channel 8 at Nashville, TN, WTVA channel 9 at Tupelo, MS, and WBBJ-TV channel 7 at Jackson, TN. These studies are submitted as Figures 1 through 9 to show the coverage of each of the studied stations along with the interference they would receive from the proposed operation of WMAE-TV. It is shown that the interference within the Grade B contours of the cochannel and adjacent channel stations occurs in areas where that station does not provide service.

KESSLER AND GEHMAN ASSOCIATES, INC.

Keith G. Blanton

Keith G. Blanton, Consultant

August 20, 1997



MSITE(tm):WMAEDTV

Propagation model: Longley-Rice v1.2.2

Time: 90.00% Loc: 50.00% Margin: .0 dB

Climate: Continental Temperate

Gndcvr: None



Atm. factor: None

K Factor: 1.333

RX Antenna: DA-\msite\pat\ntsc

Height: 10.0 mtrs AGL Gain: .0 dBd

Field strength (at remote)

	> 41.0 dBuV/m
	< 41.0 dBuV/m

Minimum threshold level: -150.0 dBmW

Site	Ant. Eiv AMSL (mtrs)	ERPd (dBW)	Ant. Type /Orient.	Coordinates
WMAEL9*	386.0	35.00	DA-H	N 34 40 .00
grp: 1	183.0000 MHz		.0	W 88 45 5.00



WMAE DTV STUDIES

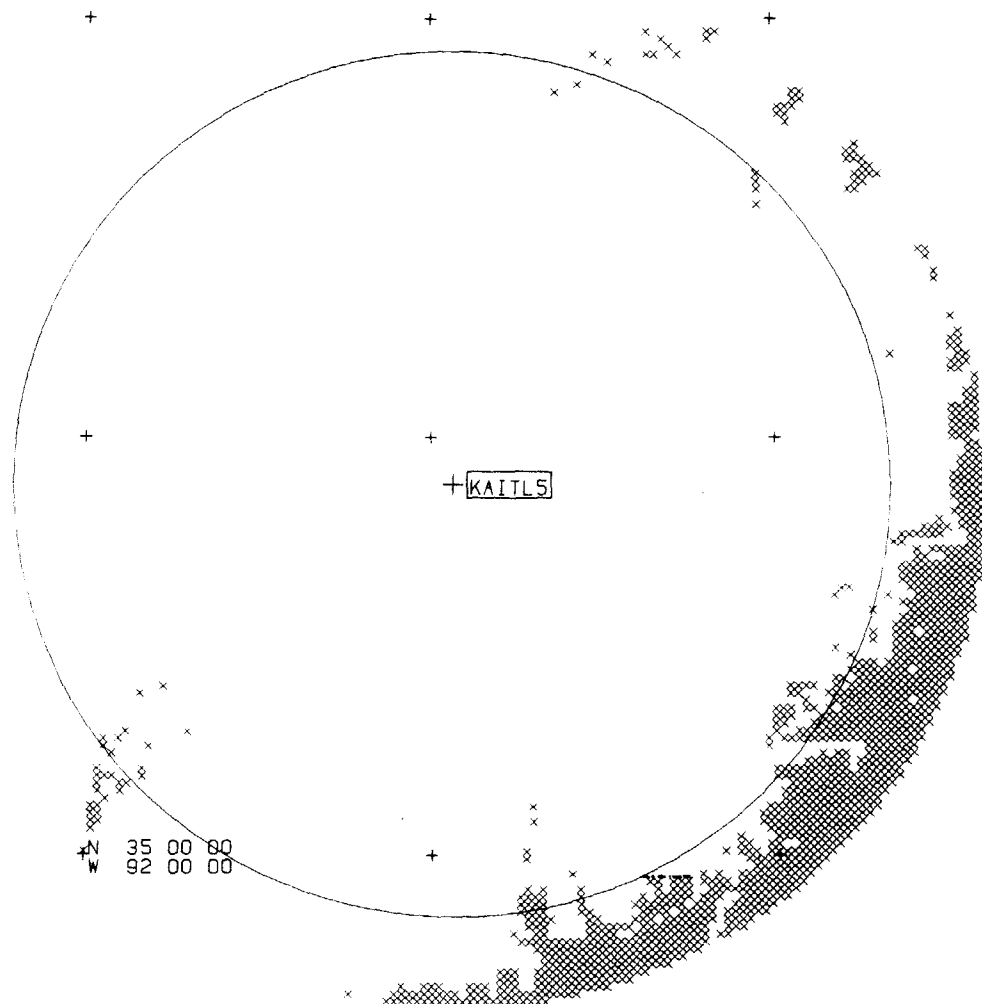
Kessler and Gehman Associates

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FIG.1

Ref. grid: 1 degree

North

MSITE(tm):WMAEDTV

Propagation model: Longley-Rice v1.2.2

Time: 50.00% Loc: 50.00% Margin: .0 dB

Climate: Continental Temperate

Gndcvr: None

Atm. factor: None

K Factor: 1.333

RX Antenna: DA-\msite\pat\ntsc

Height: 10.0 mtrs AGL Gain: .0 dBd

C/I ratio - group 1 TXs to group 2 TXs

> 34.0
< 34.0

Minimum threshold level: -150.0 dBmW

Site	Ant Elv AMSL (mtrs)	ERPd (dBW)	Ant. Type /Orient.	Coordinates
WMAEL1	386.0	35.00	DA-H	N 34 40 .00
grp: 2	183.0000 MHz	.0		W 88 45 5.00
WDCNL5*		55.00	OM-H	N 36 2 49.00
grp: 1	183.0000 MHz			W 86 49 49.00
KAITLS	610.0	55.00	OM-H	N 35 53 17.00
grp: 1	183.0000 MHz			W 90 56 9.00

KILOMETERS
50 0 50

WMAE DTV STUDIES

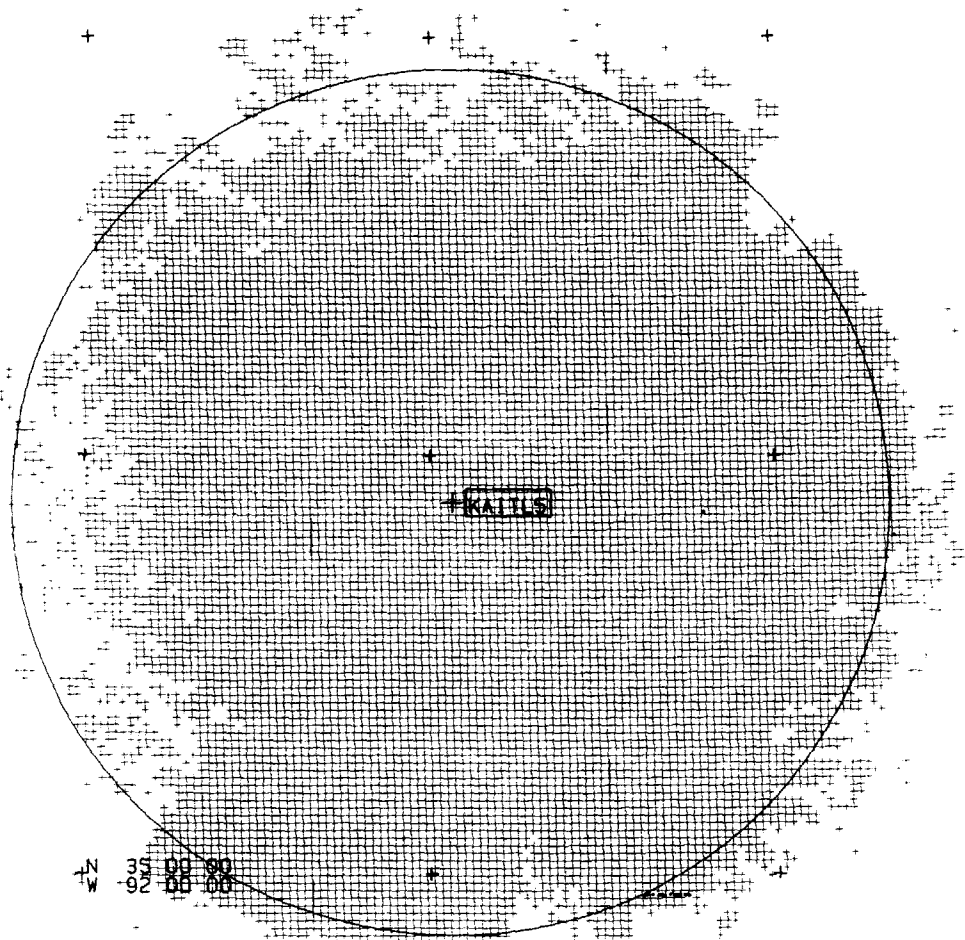
Kessler and Gehman Associates

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FIG. 2

Ref. grid: 1 degree

North
↑





N 35 00 00
W 92 00 00

MSITE(tm):WMAEDTV

Propagation model: Longley-Rice v1.2.2
Time: 50.00% Loc: 50.00% Margin: .0 dB
Climate: Continental Temperate
Gndcvr: None
Atm. factor: None
K Factor: 1.333
RX Antenna: DA-\msite\pat\ntsc
Height: 10.0 mtrs AGL Gain: .0 dBd

Field strength (at remote)

 > 56.0 dBuV/m
 < 56.0 dBuV/m

Minimum threshold level: -150.0 dBmW

Site	Ant Elv AMSL (mtrs)	ERPd (dBW)	Ant. Type /Orient.	Coordinates
WDCNL5*		55.00	OM-H	N 36 2 49.00
grp: 1	183.0000 MHz			W 86 49 49.00
KAITL5	610.0	55.00	OM-H	N 35 53 17.00
grp: 1	183.0000 MHz			W 90 56 9.00

KILOMETERS


WMAE DTV STUDIES

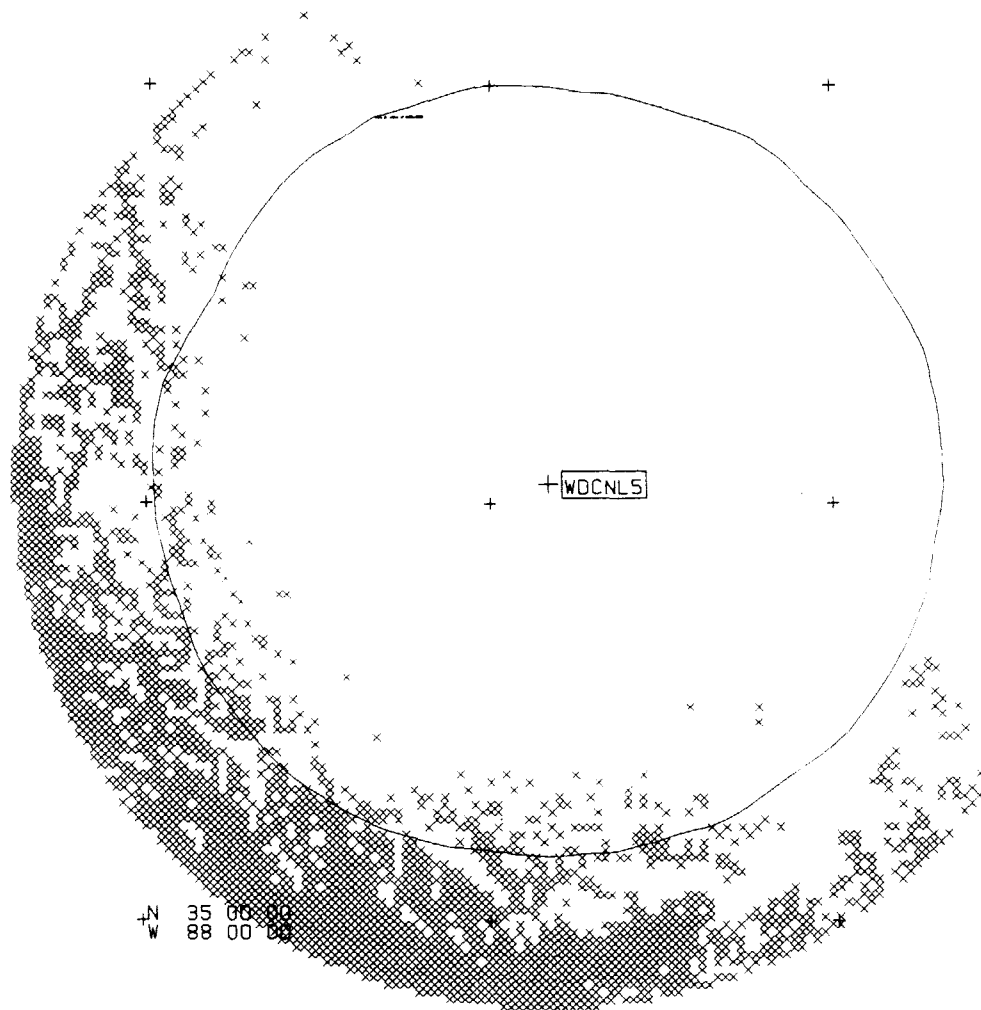
Kessler and Gehman Associates

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FIG. 3

Ref. grid: 1 degree

North



MSITE(tm):WMAEDTV

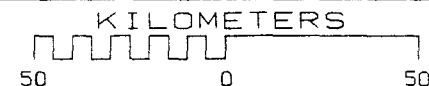
Propagation model: Longley-Rice v1.2.2
 Time: 50.00% Loc: 50.00% Margin: .0 dB
 Climate: Continental Temperate
 Gndcvr: None
 Atm. factor: None
 K Factor: 1.333
 RX Antenna: DA-\msite\pat\ntsc
 Height: 10.0 mtrs AGL Gain: .0 dBd

C/I ratio - group 1 TXs to group 2 TXs

☐ > 34.0
☒ < 34.0

Minimum threshold level: -150.0 dBmW

Site	Ant Elv		Ant. Type /Orient.	Coordinates
	AMSL (mtrs)	ERPd (dBW)		
WMAEL1	386.0	35.00	DA-H	N 34 40 .00
grp: 2	183.0000	MHz	.0	W 88 45 5.00
WDCNLS*	591.0	55.00	OM-H	N 36 2 49.00
grp: 1	183.0000	MHz		W 86 49 49.00



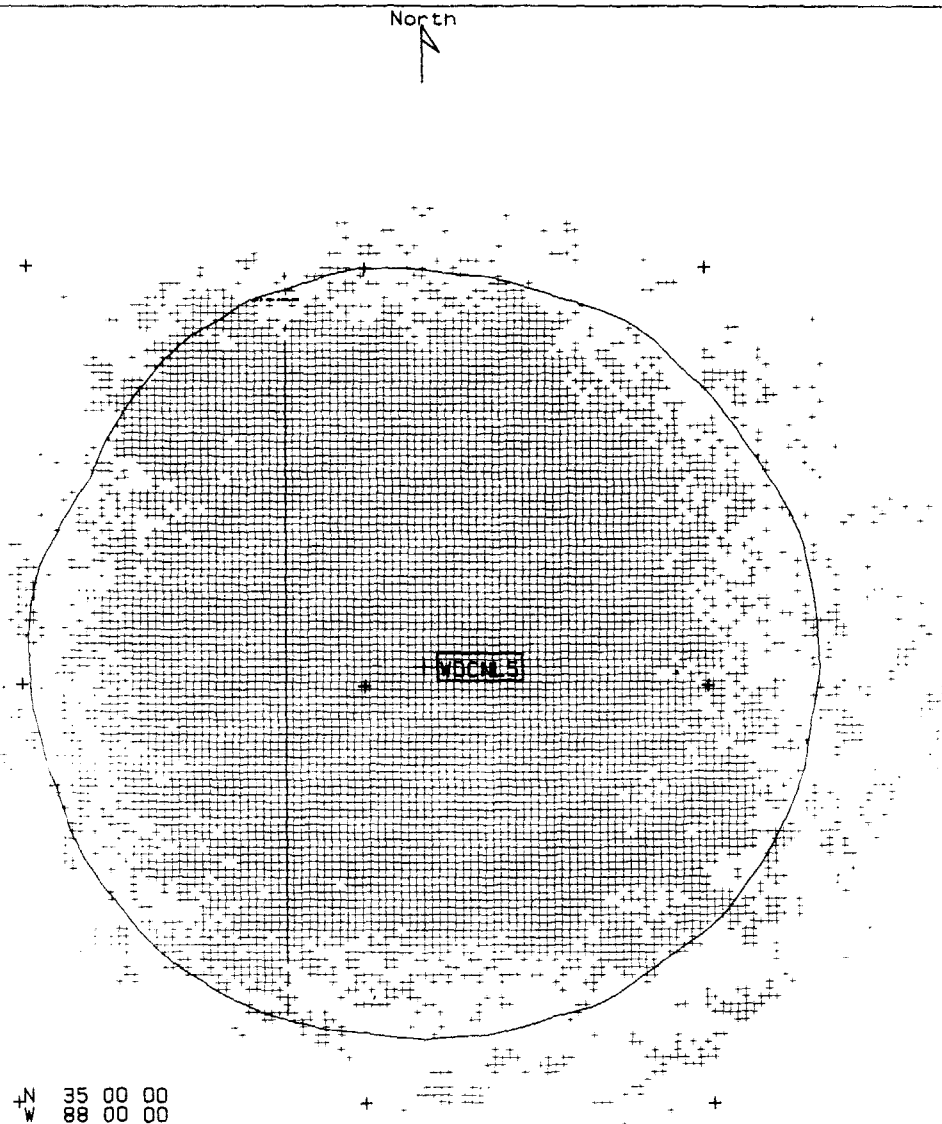
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FIG.4

Ref. grid: 1 degree



MSITE(tm):WMAEDTV

Propagation model: Longley-Rice v1.2.2

Time: 50.00% Loc: 50.00% Margin: .0 dB

Climate: Continental Temperate

Gndcvr: None

Atm. factor: None

K Factor: 1.333

+ RX Antenna: DA-\msite\pat\ntsc

Height: 10.0 mtrs AGL Gain: .0 dBd

Field strength (at remote)

+ > 56.0 dBuV/m
- < 56.0 dBuV/m

Minimum threshold level: -150.0 dBmW

Site	Ant Elv AMSL (mtrs)	ERPd (dBW)	Ant. Type /Orient.	Coordinates
WDCNLS*	591.0	55.00	OM-H	N 36 2 49.00
grp: 1	183.0000 MHz			W 86 49 49.00

KILOMETERS
50 0 50

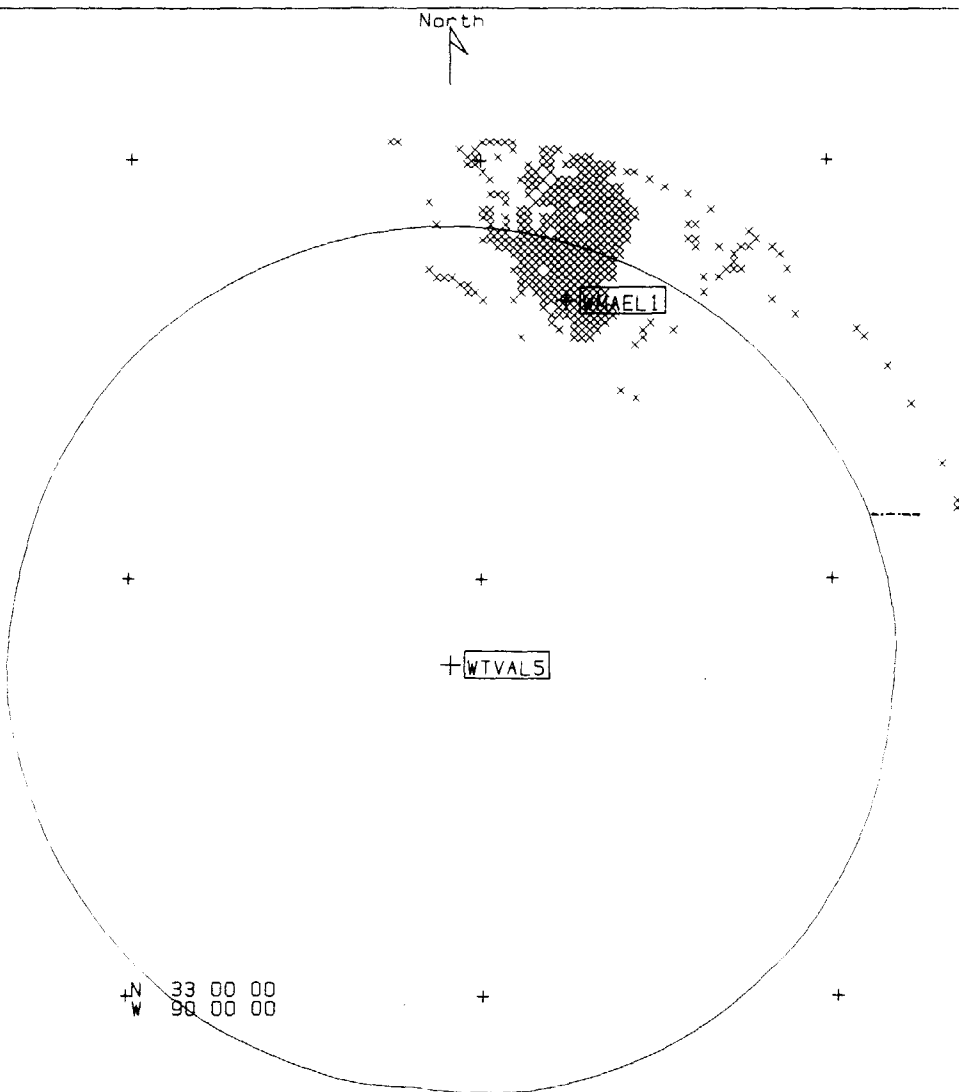
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Ref. grid: 1 degree

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FIG. 5



MSITE(tm):WMAEDTV

Propagation model: Longley-Rice v1.2.2

Time: 50.00% Loc: 50.00% Margin: .0 dB

Climate: Continental Temperate

Gndcvr: None

Atm. factor: None

K Factor: 1.333

RX Antenna: DA-\msite\pat\ntsc

Height: 10.0 mtrs AGL Gain: .0 dBd

C/I ratio - group 1 TXs to group 2 TXs



> -17.0

< -17.0

Minimum threshold level: -150.0 dBmW

Site	Ant Elv		Ant. Type	Coordinates
	AMSL (mtrs)	ERPd (dBW)		
WMAEL1	386.0	35.00	DA-H	N 34 40 .00
grp: 2	183.0000 MHz	.0		W 88 45 5.00
WTVAL5*	649.0	55.00	OM-H	N 33 47 40.00
grp: 1	189.0000 MHz			W 89 5 16.00



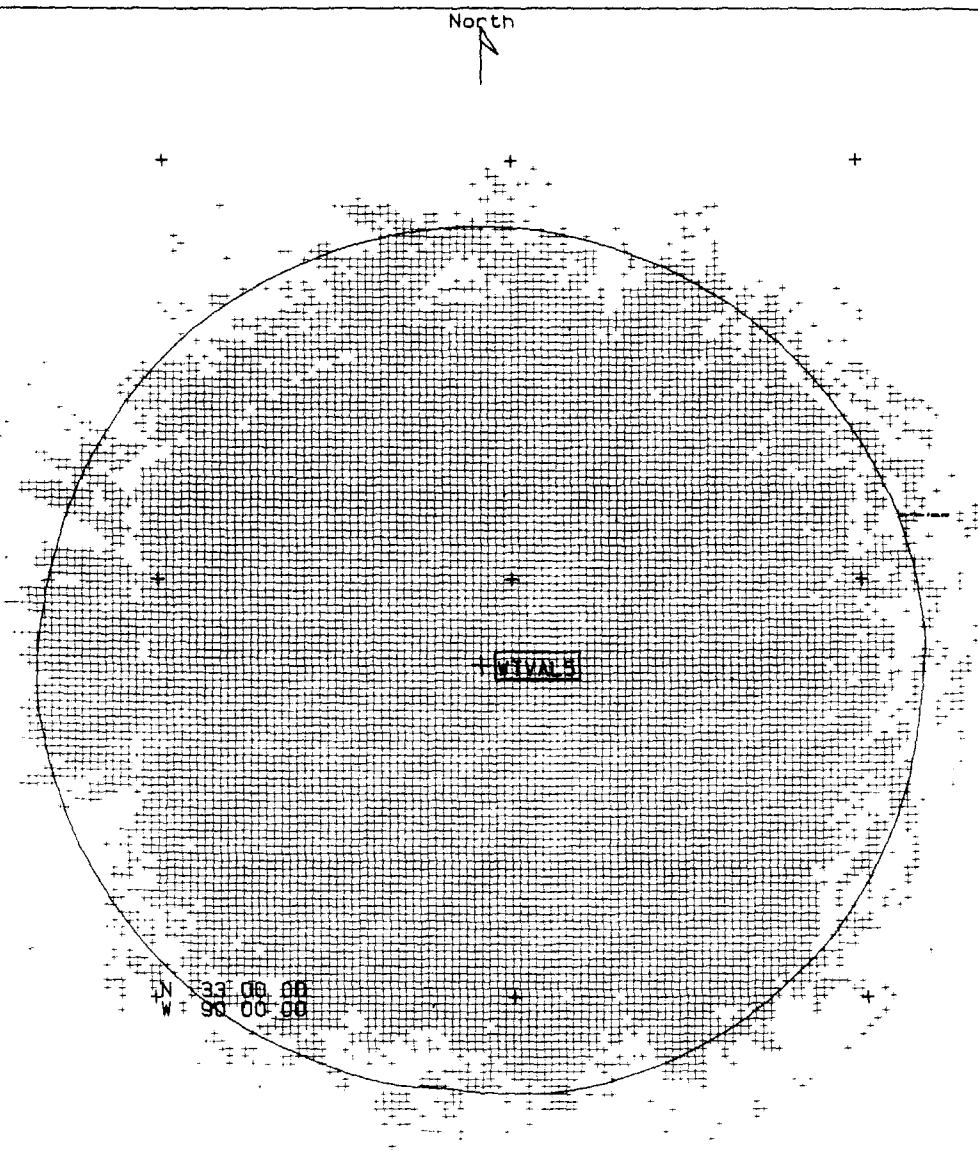
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FIG. 6

Ref. grid: 1 degree



MSITE(tm):WMAEOTV

Propagation model: Longley-Rice v1.2.2
 Time: 50.00% Loc: 50.00% Margin: .0 dB
 Climate: Continental Temperate
 Gndcvr: None
 Atm. factor: None
 K Factor: 1.333
 RX Antenna: DA-\msite\pat\ntsc
 Height: 10.0 mtrs ACL Gain: .0 dBd

Field strength (at remote)

> 56.0 dBuV/m
 < 56.0 dBuV/m

Minimum threshold level: -150.0 dBmW

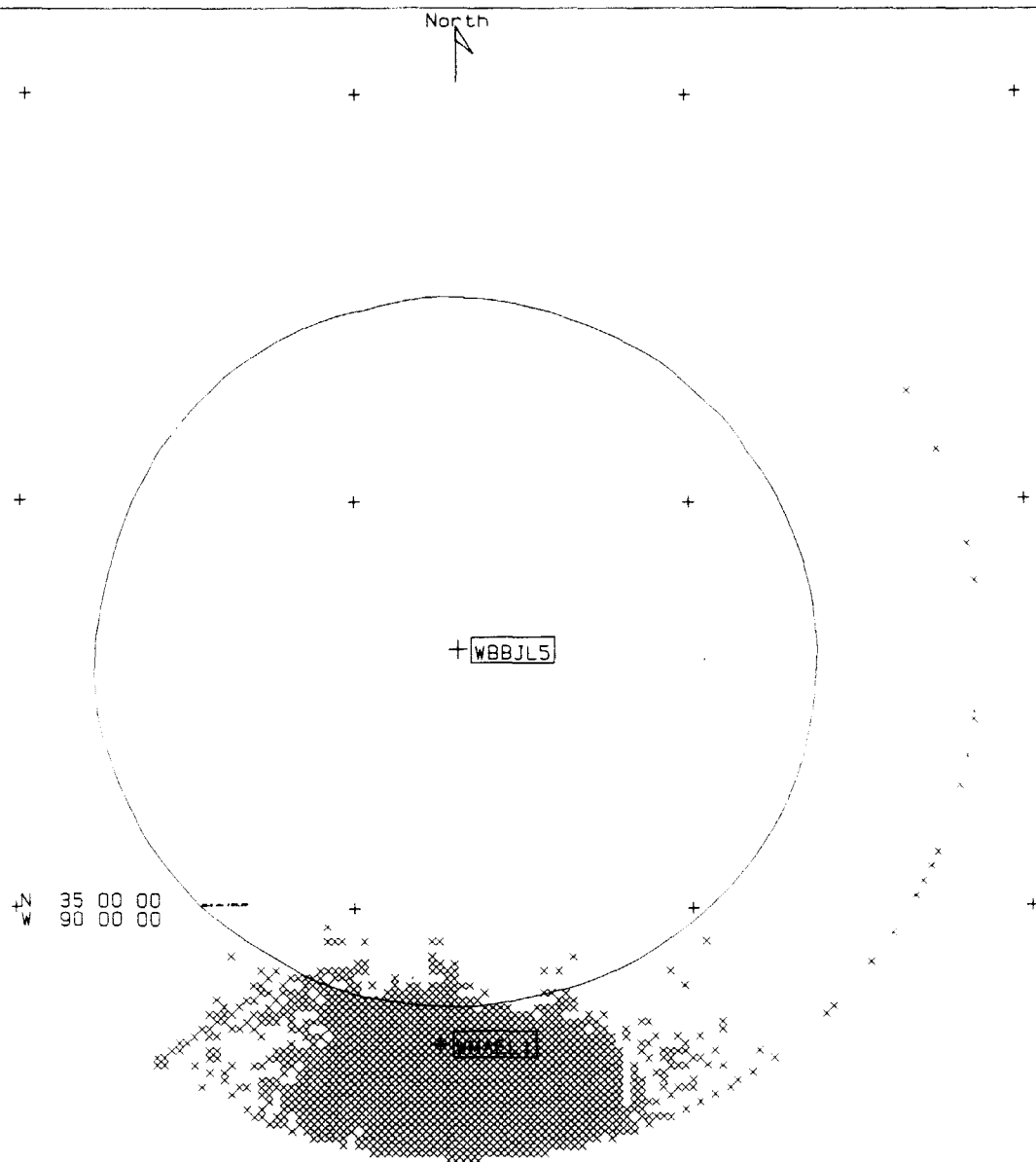
Site	Ant Elv		Ant. Type /Orient.	Coordinates
	AMSL (mtrs)	ERPd (dBW)		
WTVAL5*	649.0	55.00	OM-H	N 33 47 40.00
grp: 1	189.0000 MHz			W 89 5 16.00

KILOMETERS
 50 0 50

WMAE DTV STUDIES
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 970818

Ref. grid: 1 degree

FIG. 7



MSITE(tm): WMAEDTV

Propagation model: Longley-Rice v1.2.2
 Time: 50.00% Loc: 50.00% Margin: .0 dB
 Climate: Continental Temperate
 Gndcvr: None
 Atm. factor: None
 K Factor: 1.333
 RX Antenna: DA-\msite\pat\ntsc
 Height: 10.0 mtrs AGL Gain: .0 dBd

C/I ratio - group 1 TXs to group 2 TXs

☐ > -12.0
☒ < -12.0

Minimum threshold level: -150.0 dBmW

Site	Ant Eiv AMSL (mtrs)	ERPd (dBW)	Ant. Type /Orient.	Coordinates
WMAEL1*	386.0	35.00	DA-H	N 34 40 .00
grp: 2	183.0000 MHz		.0	W 88 45 5.00
WBBJL5	459.0	55.00	OM-H	N 35 38 15.00
grp: 1	177.0000 MHz			W 88 41 32.00

KILOMETERS

50 0 50

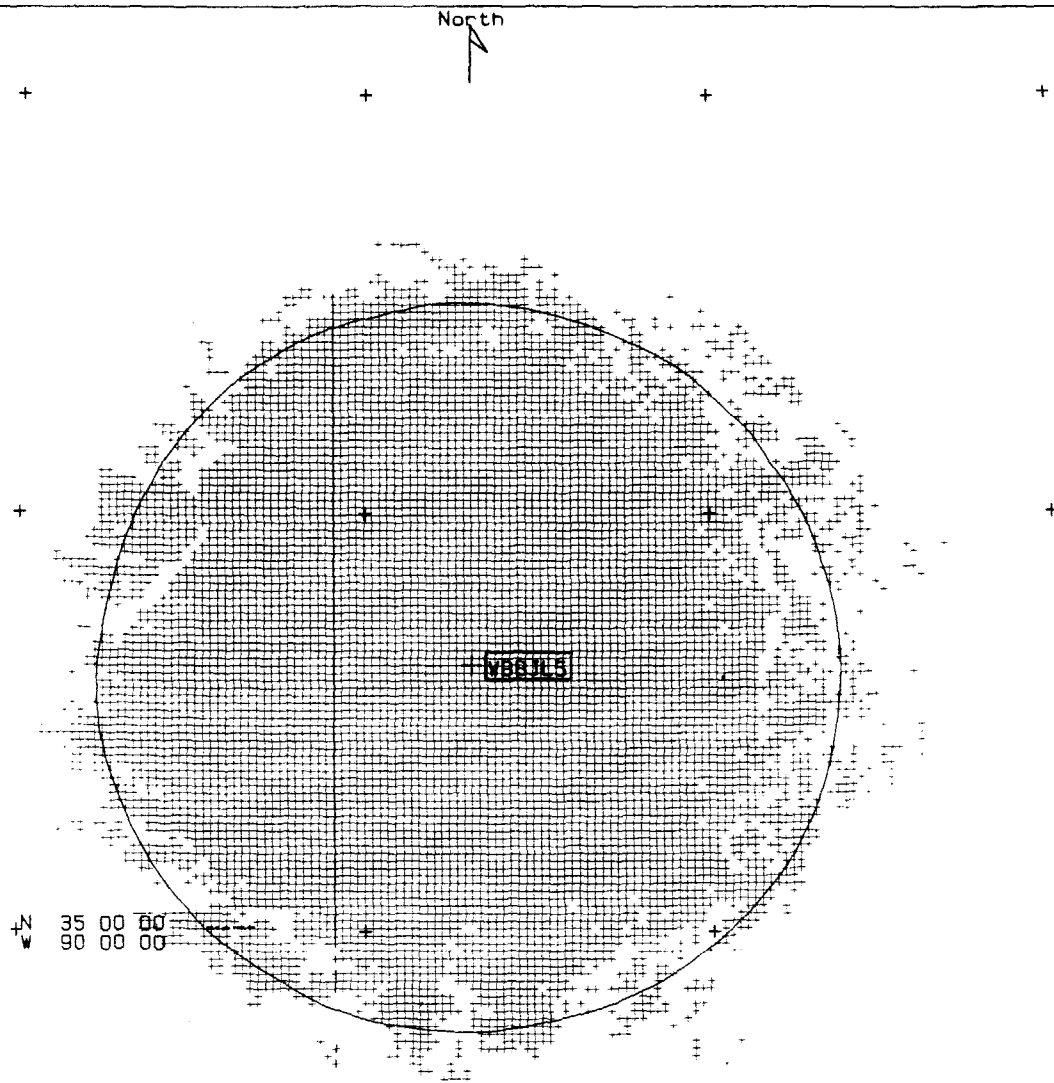
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FIG. 8

Ref. grid: 1 degree



MSITE(tm):WMAEDTV

Propagation model: Longley-Rice v1.2.2
 Time: 50.00% Loc: 50.00% Margin: .0 dB
 Climate: Continental Temperate
 Gndcvr: None
 Atm. factor: None
 K Factor: 1.333
 RX Antenna: DA-\msite\pat\ntsc
 Height: 10.0 mtrs AGL Gain: .0 dBd

Field strength (at remote)

☐ > 56.0 dBuV/m
☐ < 56.0 dBuV/m

Minimum threshold level: -150.0 dBmW

Site	Ant Elv		Ant. Type /Orient.	Coordinates
	AMSL (mtrs)	ERPd (dBW)		
WBBJL5*	459.0	55.00	OM-H	N 35 38 15.00
grp: 1	177.0000 MHz			W 88 41 32.00



WMAE DTV STUDIES

Kessler and Gehman Associates

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FIG. 9

Ref. grid: 1 degree

ENGINEERING STATEMENT OF KEITH G. BLANTON OF THE FIRM OF
KESSLER AND GEHMAN ASSOCIATES, INC.,CONSULTING ENGINEERS,
IN CONNECTION WITH THE DIGITAL TELEVISION ASSIGNMENTS TO
MISSISSIPPI AUTHORITY FOR EDUCATIONAL TELEVISION
FOR STATION ASSIGNMENTS APPLIED FOR IN 1996
IN THE STATE OF MISSISSIPPI

I, Keith G. Blanton, am an associate of Kessler and Gehman Associates, Inc., with offices in Gainesville, Florida. I have been working in the field of radio and television consulting engineering since 1961. I graduated from Duke University in 1951 with a Bachelor of Science degree in Physics.

This firm has been employed by Mississippi Authority for Educational Television (MAET) applicant for educational television station assignments in several cities in Mississippi to make studies regarding the DTV channel that had been proposed for the use of these stations in the 6th Report and Order in MM Docket 87-268. On July 24, 1996 MAET filed applications for unused educational television allotments channel 47 at Hattiesburg, MS, File No.BPET960724KS, and channel channel 45 at Columbia, MS, File No BPET960724KR. These were intended to upgrade the LPTV stations W47BP and W45AA that MAET operates at those cities to full service educational TV stations. Again on September 19, 1996 MAET filed applications for unused educational television allotments channel 42 at Natchez, MS, File No BPET960919KY, channel 43 at Columbus, MS, File No. BPET960919KL, channel 31 at Cleveland, MS, File No. BPET960919KJ, channel 32 at Yazoo City, MS, File No. BPET960919KK, and channel 21 at Clarksdale, MS, File No. BPET960919KM.

It is stated in the 6th Report and Order that applications filed before September 20, 1996 such as these would be expected to operate with DTV technology and that the FCC would maintain and protect those vacant NTSC allotments that are the subject of pending applications. In view of these statements it is assumed that the applications would be granted for DTV operation on the NTSC channels applied for, however they do not appear to have been included in the DTV table of assignments.

Contrary to paragraph 112 of the 6th Report and Order the FCC has assigned DTV channel 47 for the use of WMAWTV at Meridian, MS and DTV channel 48 for the use of WXXVTV at Gulfport, MS both of which would be shortspaced to the operation of DTV Channel 47 at

Hattiesburg, MS. It is apparently assumed that both WMAW and WXXV would return to their NTSC channels 14 and 25 respectively at the end of the transition period which would delay the construction of the Hattiesburg channel 47 DTV station until that time.

Similarly the FCC has assigned DTV channel 45 to WGMB at Baton Rouge, LA which would be shortspaced to the operation of DTV channel 45 at Columbia, MS. It is apparently assumed that WGMB would return to its NTSC channel 44 at the end of the transition period which would thereby delay the construction of the channel 45 DTV station at Columbia until that time.

The FCC has assigned DTV channel 42 to WBRZ channel 2 at Baton Rouge, LA which would be shortspaced to the operation of DTV channel 42 at Natchez, MS. Since the NTSC channel 2 of WBRZ would not be in the Core it is unlikely that WBRZ would vacate their DTV operation on channel 42 thereby precluding the use of Channel 42 at Natchez, MS. Therefore construction of the Natchez, MS facility of MAET would be delayed until a suitable channel becomes available at the end of the transition period.

Regarding the proposed operation of the MAET station at Columbus MS on DTV channel 43, this operation would comply with the separation requirements of the 6th Report and Order and could commence with the granting of the construction permit. However as proposed in the 6th Report and Order NTSC operation of the Columbus MAET station would not be permissible.

The FCC has assigned DTV channel 31 to WLMT at Memphis, TN which would be shortspaced to the operation of DTV channel 31 at Cleveland, MS. It is apparently assumed that WLMT would return to its NTSC channel 30 at the end of the transition period which would thereby delay the construction of the channel 31 DTV station at Cleveland until that time.

Regarding the proposed operation of the MAET station at Yazoo City, MS on DTV channel 32, this operation would comply with the separation requirements of the 6th Report and Order and could commence with the granting of the construction permit.

The FCC has assigned DTV channel 21 to WAPT at Jackson, MS which would be shortspaced to the operation of DTV channel 21 at Clarksdale, MS. It is apparently assumed that WAPT would return

to its NTSC channel 16 at the end of the transition period which would thereby delay the construction of the channel 21 DTV station at Clarksdale until that time.

MAET desires to construct a new LPTV station at Amory, MS at the earliest opportunity. However it will apparently not be possible to do so until a window is opened during which applications may be filed for new LPTV stations. Preliminary studies made indicate that there are no channels available for the proposed station which would fall in the core area. It is hoped that the FCC will do its best to assure that an available channel will be available after the transition period.

KESSLER AND GEHMAN ASSOCIATES, INC.

Keith G. Blanton

August 11, 1997

Keith G. Blanton, Consultant